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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,516	02/17/2000	M. Arif Karabeyoglu	A-67587-1/AJT/MSS	6762

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EXAMINER

FELTON, AILEEN BAKER

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/505,516	Applicant(s) KARABEYOGLU ET AL.	
	Examiner Aileen B Felton	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14 and 49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. According to Applicant's claim, any propellant that comprises an alkane with carbon from 15 to 80 will have a liquid viscosity less than 1 milliPa-sec and surface tension of less than 25 milliN/m. "Comprising" scope allows for any other ingredients to be included. Since other elements (or lack thereof) are required in order to meet these claimed properties, one of ordinary skill in the art would not be able to determine what compositions would meet these limitations without undue experimentation.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 49 is rejected under 35 U.S.C. 102(b) as being anticipated by Stickler(5,529,648).

Art Unit: 3641

Stickler discloses a fuel composition for use in hybrid fuel engines that comprises alkanes from 25-40 carbon atoms (col. 5, lines 35-40) that is combusted with a conventional hybrid rocket oxidant. The fuel and oxidant are kept separate until they are fed into the motor for combustion. The viscosity and surface tension are inherent properties of this fuel. As to limitations which are considered to be inherent in a reference, note the case law of *In re Ludke*, 169 USPQ 563; *In re Swinehart*, 169 USPQ 226, *In re Fitzgerald*, 205 USPQ 594; *In re Best et al*, 195 USPQ 430; and *In re Brown*, 173 USPQ 685, 688.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols et al(5,616,882).

Nichols et al discloses a rocket fuel that comprises alkanes from 1-20 carbon atoms.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fuel as taught by Nichols with a hybrid rocket engine since Nichols suggests that it can be used with any rocket fuel application or space =- based application requiring a high energy fuel.

Allowable Subject Matter

6. Claim 14 is allowed.

Response to Arguments

7. Applicant's arguments filed 11/13/2003 have been fully considered but they are not persuasive. Applicant's arguments regarding the Stickler reference are not persuasive. Please note that claim 49 is of "comprising" scope and may include any other components. Stickler does suggest alkane in a hybrid rocket fuel with carbon of 25-40.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aileen Felton whose telephone number is (703) 306-5751. The examiner can normally be reached on Monday through Friday from 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198.

The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687. The fax number for submissions before a final action is (703) 872-9326, for after final submissions is (703) 872-9327, and customer service is (703) 872-9325.

Art Unit: 3641

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Aileen B. Felton

Aileen B. Felton